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GEOGRAPHIC INTELLIGENCE REPORT

TETYUKH - MARGARITOVO COASTAL REGION

CIA/RR-GR-49

7 May 1954

CENTRAL INTELLIGENCE AGENCY

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AMS N504 Series, Eastern Siberia, Sheets NL 53-11, first edition, May 1953; and NK 53-2, first edition, April 1953; 1:250,000. Unclassified.

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I. Introduction

The Tetyukhe -- Margaritovo Coastal Region is located in the southeastern part of Primorskiy Kray of the Soviet Far East. It stretches from Tetyukhe* 145 kilometers (90 miles) southward to Margaritovo. From the Sea of Japan, it extends inland for about 32 kilometers (20 miles).

The terrain of the region ranges from hilly to mountainous. These hills and mountains, which make up the eastern flank of the Sikhote-Alin' Mountains, are steep with rounded summits. They are deeply incised by the many short streams which flow to the sea. A dense, often jungle-like deciduous forest is almost universal throughout the coastal region. Its composition varies with differences in elevation, drainage, and exposure. Animal life is rich and varied.

Long stretches of regular, high-cliffed coastline are interrupted by narrow beaches and shallow river mouth bays. Two large gulfs, Zaliv Vladimira and Zaliv Ol'gi, provide sheltered harbors. The climate of the coastal region is monsoonal with summer winds and rain from the Pacific and the Sea of Japan and winter cold winds and snow

*The town of Tetyukhe is the settlement about 30 kilometers (19 miles) up the Tetyukhe Valley (in the vicinity of Verkhov'ye on the AMS 1:250,000 map). Its port, Tetyukhe-Pristan', is located at the mouth of the Tetyukhe River. Although these two settlements are clearly differentiated on the most recent Soviet maps and in Soviet administrative handbooks, most intelligence sources make no distinction between the two and place Tetyukhe on the coast at the port location.

from interior Asia. Most of the high annual precipitation occurs in spring and summer. Heavy maritime fogs are also most common in spring and summer. Winter is the season of long-lasting snow cover and ice-locked streams. Most of the shallow bays freeze, but ice-breakers keep some open for navigation.

Roads and coastal sea lanes provide the major arteries of transportation. A highway parallels the shoreline throughout the entire length of the coastal region. Several important roads, recently constructed or improved, cross the Sikhote-Alin' Mountains and connect the coast with the Ussuri Basin to the west. Only two major railroads push inland from the coast. Air service is only a supplementary form of transportation.

The population consists of Great Russians and other Slavs, and Asiatics, both native and immigrant. Agriculture is the dominant activity in the fertile valley bottoms. Hunting, trapping, and fishing are also important. Processing industries are based upon local raw materials, such as minerals and forest products. There are numerous settlements in the coastal region with Tetyukhe and Ol'ga being the largest and most important.

II. Landscape

The Tetyukhe - Margaritovo Coastal Region is a land where the rounded dissected Sikhote-Alin' Mountains meet the sea; a land of sharp, rocky seaside cliffs occasionally interrupted by gently sloping sand and shingle beaches. It is a land where streams tumble

down narrow ravines or swing back and forth in wide swampy valleys, and it is a land of gloomy rain forests made up of great trees and tangled undergrowth. The shoreline features include rocky cliffs, steep headlands, chimney rocks, short beaches, and occasional river-mouth bays.

The main body of the Sikhote-Alin' Mountains lies to the west of the Coastal Region. The Sikhote-Alin' system consists of a series of parallel, folded ranges which trend in a general northeast-southwest direction. Average elevation of the narrow rounded summits is between 650 and 850 meters (2,132 and 2,788), but the higher peaks reach up above 1,500 meters (4,920 feet). The appearance of the Sikhote-Alin' system is more like that of a heavily dissected hill land than of towering mountains. Although the winter climate is severe, nowhere do the Sikhote-Alin' Mountains have a perpetual snow-line. Some of the more prominent peaks have a sparse vegetation cover of small plants such as golden rhododendron, cowberry, and lichen (reindeer moss), on surfaces of hard rock and talus. The eastern flanks of the Sikhote-Alin' Mountains which are found within the Coastal Region are dissected by numerous transverse valleys, some of which cut completely across the region. The stream pattern verges on the rectangular. Rivers are short and have steep gradients. Streams originating in the region have cut deep, narrow ravines in their upper courses. These ravines are often littered with fallen trees and boulders. The floods which carry the trees and move the

boulders are very violent but usually of short duration. In many places along the streams the water has washed out deep cavities which when hidden by layers of vegetation such as fern fronds may become dangerous pitfalls. Near the coast meandering, often braided, streams flow in broad valleys; however, the Lafule (Tadushi) Valley remains wide as it crosses the region. The main channel of a braided stream usually lies on the southern side of the valley. Sometimes a river completely changes to a new channel after a flood. Movement up some stream valleys requires frequent fording since streams often flow against the valley walls and eliminate the trails.

In summer the forests of the Sikhote-Alin', with big trees and tangled undergrowth, resemble tropical, primeval rain forests. The forest vegetation is stratified according to elevation. The lowest belt consists of cedar, Siberian spruce, and linden. The next belt is composed of birch, Manchurian nut, and Mongolian oak, above which are lilac and cork trees. At still higher elevations the deciduous trees are displaced by fir and white-bark spruce. Above 1,000 meters (3,300 feet) is the East Siberian taiga, composed largely of Dahurian larch, a deciduous conifer. Evergreen conifers are rare in the coastal region and are restricted to slopes with southern to south-eastern exposure. At lower elevations undergrowth in the deciduous part of the forest is dense and often impenetrable. Ferns and grasses are interspersed with thickets of creeping vines. In many of the valley bottoms crops and pastures have replaced the original

grasses and broadleaf woodlands. In some of the uncleared valleys, the forest canopy is so dense that it completely screens out the sunlight and produces an appearance of perpetual twilight. In poorly drained valleys, there is marsh or rank grass vegetation (Figure 1). Hillsides which have been cut or burned are usually covered by a scrubby second growth, whereas valley flats which have been logged or burned often become meadowland. Many of the trees are rotten or hollow and the larger of these may be used as places of shelter by hibernating bears.

The forest is damp and dark and covered with moss, ferns, and willow. In general, the forest growth becomes denser with increasing elevation. The ground also becomes more encumbered with burelom (storm-felled timber) since roots spread out laterally in the thin mountain soils, and the trees are easily blown over by strong winds. The mass of upturned roots filled with earth and stones frequently barricade mountain trails and dam streams. However, the fallen trees occasionally perform a useful function when they fall across streams and form natural bridges.

The forest undergrowth consists of a great variety of plants. It includes a tangle of vetch, hazel, ashen willow (half tree, half shrub), winged spindlewood, honeysuckle (growing as high as 13 feet), thorn bushes, briars, thyme, and many vines. In the more moist places, fronds of luxuriant ferns extend like the outstretched wings of an eagle (hence, the local name eagle-fern). A few of the numerous

Figure 1. Dense vegetation on a wet valley bottom and on mountain sides in the Sikhote - Alin' Range.

flowering plants include the poisonous white hellebore; the pink-flowering dittany which produces an inflammable gas in hot weather; the blue aconite, a medicinal plant; the lady's slipper; the fiery red catch-fly; and the orange globeflower. In shaded glens the aromatic, forked-root ginseng is widely sought by natives because of its reputed medicinal and rejuvenation qualities.

Cross-country movement within the Sikhote-Alin' Mountains is generally difficult. Slopes are steep, valleys are often swampy and subject to flood, the forests are dense, and the trails are few. Cross-country movement along the valleys is probably easiest in late fall and in winter when the ground is driest. Between February and late May, deep snow gives way to deep mud. Approaches to high passes are steep, rocky, and often windy, and wet. Along the coast quicksand is common where the tide undermines the sand. When the tide is out the same sand becomes firm. Drinking water, which may be contaminated, is obtainable in all large valleys, but the sources are frozen from late November to mid-April.

III. Coastal Features

A narrow rocky shelf backed by precipitous cliffs which rise 30 meters (100 feet) or more above the surf (Figure 2), is characteristic of most of the coast. Where streams cut through the cliff walls, beaches have formed on the alluvium. Offshore features include a number of barrier bars built by wave action. Opposite river mouths, lagoons have frequently formed behind the bars. Longshore currents

Figure 2. Steep cliffs and rocky shoreline 13 kilometers (8 miles) north-northeastward of Bukhta Tetyukhe but typical of much of the shoreline to the south. Date of photograph - 1502.

from the south have created northward-trending spits and bay-mouth bars (Aerial Photograph 1).

The major indentations along the coast are the two bays -- Zaliv Vladimira and Zaliv Ol'gi. There are a number of other smaller bays and inlets including Bukhta (Bay) Tetyukhe, Bukhta Lafule, Bukhta Tamokhedza, Bukhta Yevstafiya, and Bukhta Pkhuzum. Important promontories along the coast from north to south are Mys (Cape) Brinera (marked by a light) near Tetyukhe-Pristan', Mys Yuzhnyy, Mys Balyuzek (marked by a light), Mys Vatovskogo, Mys Chetyrekh Skal, Mys Sobora, Mys Skalistyy, Mys Manevskogo, Mys Kekurnyy, Mys (Mayak or lighthouse) Nizmennyy, Mys Kudrina, Mys Makhval'nogo, and Mys Chasovoy.

The three longest beaches in the stretch of coast between Tetyukhe-Pristan', are located at Bukhta Tetyukhe, Bukhta Lafule, and near Ozero Izvestnyak. They are sandy, stream-mouth beaches averaging more than 1.5 kilometers (1 mile in length and 105 meters (350 feet) in width at low water and 27 meters (90 feet) at high water. Surf is moderate to rough when southeasterlies blow. The parts of stream valleys behind these beaches are generally swampy, the hills flanking the valleys are moderately steep, and the shoreline cliffs are precipitous (Figures 3 and 4). Tetyukhe beach is on the long bar which is just off the mainland (Aerial Photograph 2). According to U.S. sources, Bukhta Tetyukhe is relatively free of ice in winter and port activities continue even during slight freezes. On the other

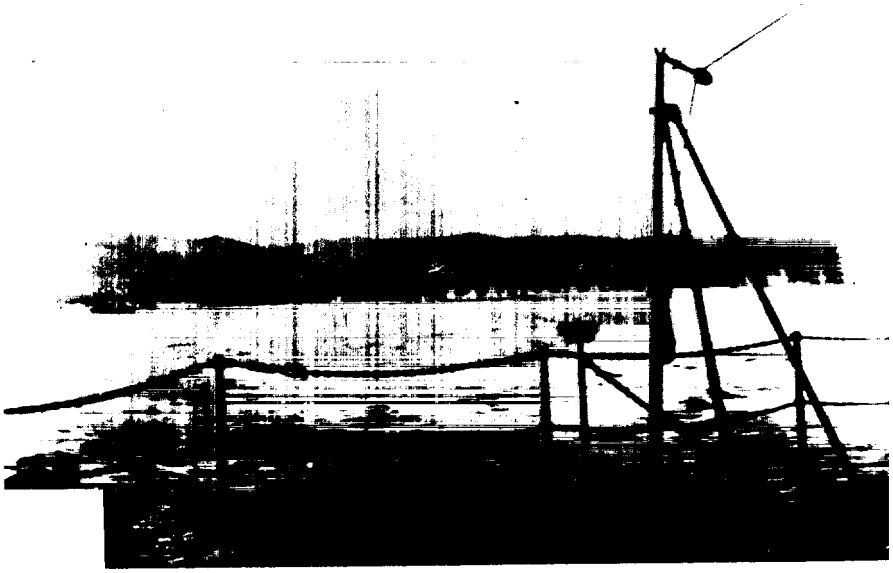

Figure 3. Bukhta Tetyukha. A probable coastal defense position is on the hill in the center of the photograph.

Figure 4. Looking south toward "Brother and Sister" or "Two Finger Rocks" from Cape Brinera. Date of photograph - 1902.

to March but that the open sea remains relatively ice-free. Large ships anchor about 1 kilometer (a half mile) from the wharf because of the shallow water. Flat-bottomed tugs and lighters shuttle passengers and freight between the ships and the pier. The unsheltered Petyakhe anchorage is exposed to summer monsoon winds from the east and to a heavy pounding surf. The offshore winter winds are also detrimental to port activities.

At Bukhta Lafule most of the beach extends southward from the mouth of the meandering Lafule River (Aerial Photographs 3 and 4). Short tributaries enter the Lafule River from both north and south. The beach gradually merges with the Lafule flood plain which is dotted with lakes and scarred by cut-off meanders and secondary channels. The beach at Ozero Izvestnyak is located at the northeast side of the lake. The lake is fed by the south-flowing Izvestnyak River, which has its outlet at the north side of the beach bar.

At Zaliv Vladimira there are a series of eight sand and pebble beaches scattered along the shores of the bay. They are interrupted by rivers and rocky headlands. Their average widths at low water are 27 meters (90 feet) and 12 meters (40 feet) at high water. The surf is generally smooth, becoming slight during periods of southeasterly winds. Zaliv Vladimira is a kidney-shaped gulf with its entrance, between Mys Bilyuzek and Mys Vatovskogo, about 2 kilometers (1.3 miles) wide. The gulf is formed by 3 distinct bays: Severnaya

Bukhta (North Bay), the largest; Zapadnaya Bukhta (West Bay), the smallest; and Yuzhnaya Bukhta (South Bay). The southward-flowing Khulnay River turns sharply to the east and enters Severnaya Bukhta near the town of Veselyy Yar (Aerial Photograph 5). The Vladimirovka River spills into Yuzhnaya Bay from the southwest (Aerial Photograph 6). The land behind the beaches consists of narrow swampy lowlands or rough heavily wooded hills. The shores of the bays consist in part of high cliffs backed by steep rugged slopes, but there are also low sandy beaches backed by marshes and deep river valleys which extend a considerable distance into the mountains. Zaliv Vladimira provides excellent sheltered anchorage in depths of 5 to 15 fathoms and has a deep approach. Transports under 3,000 tons can approach within 200 meters (650 feet) of the shore. Winter operations can usually be maintained by the use of ice-breakers.

Zaliv Ol'gi has three beaches of sand and pebbles within the bay. They are all more than 760 meters (2,500 feet) long, and they average 23 meters (75 feet) in width at low water and 15 meters (50 feet) at high water. The entrance to Zaliv Ol'gi has a width of about 7 kilometers (4 miles). The northern approach to the bay entrance is partially obstructed by Ostrov Chikhacheva, an islet about 645 meters (2,100 feet) long, 460 meters (1,500 feet) wide, and 117 meters (385 feet) high. The eastern side of the island has steep cliffs and a reef of huge boulders which projects about 450

meters (1,500 feet) north-northeastward from the mouth of the Ol'ga River discharges into the portion of the bay that is called Tikhaya Bukhta (Gavan' Tikhaya Pristan'), an oval-shaped harbor with a narrow entrance passage known as Brown Channel (Aerial Photographs 7 and 8). The Avvakumovka River from the northwest and the Sydaga River from the south unite before entering Zaliv Ol'gi where a delta is being formed (Aerial Photograph 9). The shore bordering the inner part of Zaliv Ol'gi is hilly to mountainous except for beach bars and marshy mouths of several stream valleys (Figures 5, 6, 7, and 8). The coastland at the entrance to the bay is marked by steep cliffs (Figure 9). Numerous wave-washed rocks jut into the sea from the coastal cliffs. Shoals extend a short distance offshore around the head of the bay. Surf is usually smooth, becoming slightly rough when churned by southeasterly winds. For the most part, however, the bay is sheltered from the winds. Eight 800-ton ships can be accommodated simultaneously in Zaliv Ol'gi. Anchorage is available in the outer part of the bay at depths of 5 to 15 fathoms. The bay is reported to be usually frozen from December to March. Dense fogs are frequent in spring and summer.

Several other small sheltered bays with beach strips occur on the coast south of Zaliv Ol'gi. These slight indentations are generally located in places where small streams empty into the sea. Mys Riznenny, a conspicuous cape about 60 meters (200 feet) high with a precipitous face 50 meters (165 feet) high, is flanked by

Figure 5. View across the low, marshy river mouth area from the shore of Zaliv Olʹgi; date of photograph - 1923.

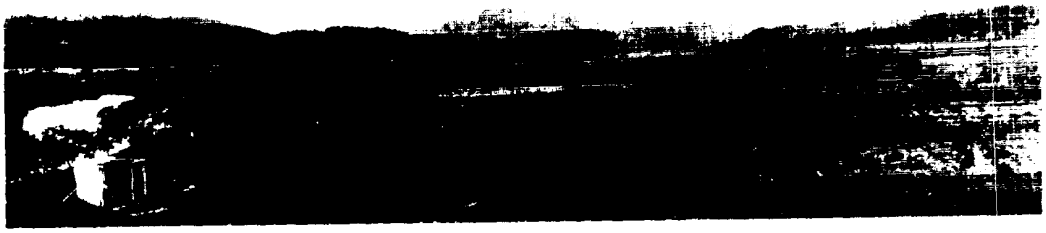

Figure 6. Grass and marsh covered valley surrounded by low, forested hills near Zaliv Olʹgi; date of photograph - 1924.

Figure 7. Karst and forested hills inland from Zaliv Ol'gi. Date of photograph - 1924.

Figure 8. Sandy beach ridge backed by a marshy valley at head of Ol'gi harbor - 1924.

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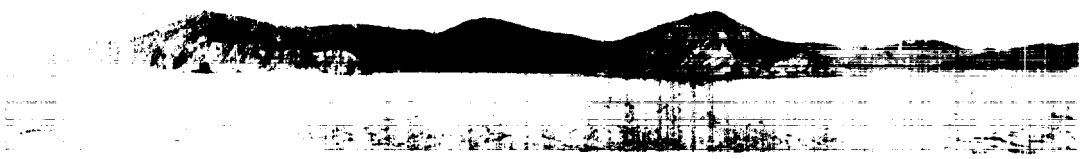

Figure 9. Cliffed coast and offshore chimney rock near Zaliv Cl'gi.

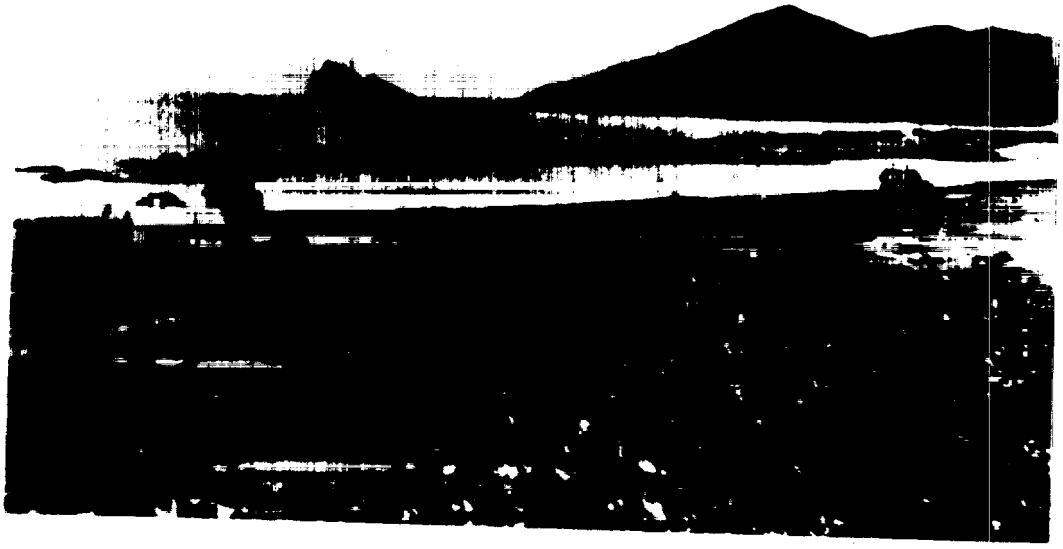

Figure 10. View south-southeastward across Bukhta Tetyukhe toward Mys Brinera. Narrow-gauge, double-track railroad in foreground. The road curving through the area lies in the center of present-day Tetyukhe-Pristan'. Date of photograph - 1927.

two sand and shingle beaches which are about 60 meters (200 feet) wide at low water and 30 meters (100 feet) wide at high water. The northern beach is only 1,135 meters (3,700 feet) long; whereas the southern one measures 3.7 kilometers (2.3 miles) in length. The northern beach is on a bar between the sea and a small lake which is backed by low forested hills. The southern beach also separates a small lagoon-like lake from the sea, and wooded hills and low mountains surround the lake. The surf at both beaches is moderate. However, when the wind blows from the open sea the surf is rough and stormy.

There is a sandy beach at Bukhta Pkhuzum which is about 1.5 kilometers (1 mile) long. The beach is about 33 meters (110 feet) wide at low water and 15 meters (50 feet) wide at high water. A narrow marshy valley bordered by steep hills and mountains leads inland from the beach. Surf is generally slight, becoming moderate with south and east winds.

IV. Climate

Monsoons, mountains, and a maritime location are the keys to the climate of the Primorskiy coastal region. During summer, warm saturated southerly winds from the Pacific and the Sea of Japan produce frequent heavy rains along the mountainous coast. In winter, cold dry winds blow seaward from central Asia and bring freezing temperatures and clear weather to the coast. Climatic conditions of the eastern slopes of the Sikhote-Alin' Mountains differ from those

on the western slopes. Heavy sea fogs tend to be restricted to the eastern side of the mountains where rainfall is also greater. There are sharp climatic variations with differences in elevation. On the higher slopes and hill tops, the air is cooler, more humid, and more precipitation falls than in the valleys. Even the hills, 350 to 450 meters (1,150 to 1,475 feet) high are curtained by fogs and clouds on summer days when bright sunlight warms the lowlands. In winter snow is deeper at higher elevations, but the summits of the lower, rolling hills tend to be warmer than the adjacent valley floors. The climate along the coast is more moderate than in the interior. The range in average temperatures between the coldest month (January) and the warmest month (July) on the coast is about 54°F (30°C). The violent winds and torrential rains of summer and autumn typhoons create much destruction along the seaward slopes of the Sikhote-Alin'.

Autumn (September and October) is a transitional season with both good and bad weather. In this period the wet summer monsoons and heavy fogs diminish and cold air masses begin to creep out of interior Asia, bringing first snow and then clear skies. Temperatures drop abruptly and some bodies of water begin to freeze. By September the number of cloudy days has decreased to 10, and October has even fewer cloudy days. In October the prevailing wind direction changes to northerly, northeasterly, and northwesterly. The northwesterly winds quickly disperse the coastal fog. After October precipitation changes almost entirely from rain to snow. In autumn, the forests take on a mournful look. The bare tree trunks lightly wrapped in chilly mist,

the yellowing grass, the fallen leaves, and the sodden, blackening forms all point to the twilight of the year. By October, blizzards (called purgas) can be expected to sweep through the mountains endangering the life of any hapless wayfarer caught in the open. During the purgs, blinding snow obscures all landmarks, temperatures plunge far below freezing and violent gales leave uprooted trees and shattered buildings in their wake.

Winter (November through March) is the season of occasional light snowstorms, penetrating winds, and clear, cold days. The prevailing winds in winter are northerly or westerly. However, in deep valleys winds are locally channeled along the axes of the valleys. The wind velocity is low inland but increases near the coast, especially at river mouths. By November temperatures average below freezing. January is the coldest month with mean daily temperatures near 0°F (-17.8°C) in the mountains and about 8°F (-13°C) (at Ol'ga) on the coast. The daily temperature range is great -- as much as 36°F (20°C) in January. The soil freezes to considerable depths. Fresh water surfaces are almost completely ice-covered, and small streams often cease to flow. Shore ice forms along the coast but is usually not thick enough to halt navigation. In winter the number of days with precipitation averages 4 per month. Only ten percent of the annual precipitation falls in winter. The first snowfall occurs in mid-October and the last in early May. In October and April the number of days with snow averages less than 10 per month. Snow cover

is present most of the time from November through March. Cloud cover is generally light with the average number of clear days exceeding 12 per month. Fogs are rare in mid-winter.

Spring (April and May) is the transition season between the winter and summer monsoons. Temperatures rise slowly to an average of about 45°F (7°C) in April and May. Spring thaws often result in serious floods. As the summer monsoon approaches the amount of cloud cover and precipitation increases rapidly. About 20 percent of the annual precipitation falls in spring. As the prevailing winds change to southerly, dense fogs from the sea usually close in on the coastal region and often shroud coastal cliffs, river valleys, and mountain slopes for several days at a time.

In summer (June through August) warm, rain-laden winds and rains lash the coast, and thick, gray fogs muffle land and sea alike. Clear days are rare, usually occurring only two or three per month. From 65 to 70 percent of the yearly precipitation total of 690 to 840 millimeters (27 to 33 inches) falls during summer. Most of the summer rain occurs late in the season. Rainy days often number more than 15 per month, and foggy days range from 10 to 20 per month. In the mountains rain falls almost incessantly. Although the valleys have less rain they are occasionally uncomfortably hot and damp. Several times during the summer, heavy rains that last from 1 to 4 days cause raging floods which wash away trees, crops, and huts in the narrow valleys. Winds are predominantly from the south and

southeast with velocities ranging from 14 to 25 kilometers (9 to 15 miles) per hour. Average monthly temperatures are generally higher than 53°F (12°C) in summer with the August average reaching about 68°F (20°C).

V. Fauna

Of all the animal life of the mountains, the clouds of tiny biting flies, called gnus, are the worst plague. The tiniest of these forest insects are barely visible to the naked eye. Their bite draws blood. The wound itches desperately and becomes aggravated with scratching. Unless the head is protected, the flies blind the eyes, become entangled in the hair, crawl in the ears, and savagely bite the neck. After such exposure, the face becomes inflamed and swollen. The gnus can drive a nervous or irritable man to distraction. Mosquito netting affords only partial protection. In addition to the gnus vicious mosquitoes add to the torment of summer in the mountains.

Birds, game animals, and beasts of prey abound in the somber forests. Twice every 24 hours the taiga awakens: at dawn the daylight creatures begin to stir; at sunset many of the larger animals begin their nocturnal search for food and water. As the sun rises the spotted woodpeckers start their staccato hammering, the sly and wary cuckoos flit from branch to branch singing their monotonous song, the hawk-beaked gray shrikes (butcher birds) set up a terrific chattering in the thickets, the handsome orange-yellow orioles, as

large as pigeons, sing from the tops of the highest trees, the warblers (Siberian nightingales) fill the air with their music, and crows and ravens begin their task of cleaning up the offal left by nightime's stalking predators. Among the game birds, the Siberian spruce grouse is probably still numerous. On sunny summer mornings, chattering chipmunks often bring out their 2 or 3-year old hoard of fungi and nuts and expose them to the air and sun to prevent rotting. Herds of wild pigs are plentiful. These marauders frequently are a bane to lowland farmers, especially at harvest time when they root in the fields of ripened grain. Wild boars often attain weights of 600 to 660 pounds, lengths of 2 meters (6.5 feet), and heights of 1 meter (3.3 feet). When wounded they are ferocious beasts, capable of ripping open dog or man with 3 inch tusks. The most fearful animal of the forest and the only one feared by the wild boars is the Siberian tiger, called amba or devil by the natives. This great predator is seldom seen except by his victims, although his track is plain to the expert woodsman. The tiger moves in darkness or daylight or when the forest is wet and steaming or piled high with snow. Deer and elk are bountiful, and game pits may still be used to trap them for meat, hides, antlers, tendons, and musk (from the male musk deer). The Japanese deer are bred by the local forest people for their antlers which are sold to the Chinese for their reputed medicinal value as a remedy for impotency and other conditions. In the rutting season in late August and early September, the great

wapiti (elk) stags battle for the favor of the hinds. There is no difficulty shooting a stag at this season, for the stags, blinded by passion, are oblivious of danger and come quite close to the hunter when called by inhaling air through a horn made of a 4-inch wide strip of birch bark rolled into a spiral about 22 inches long. Even the tiger tries to lure the elk close by attempting to imitate the stag's challenging bellow. Some of the other animals found in the mountains are the moose, the Himalayan black bear, the wolf, the yellow-throated marten, the wolverine, the sable, the Amur goral (antelope-goat), the raccoon dog [an omnivorous hibernating animal nearly 1 meter (about 3.3 feet) long], the badger, and the pika (a shy rodent somewhat like a rabbit which haunts the talus-covered mountain sides). The common viper and common lizard may also be seen.

In shady, fresh water streams, pearl-bearing mussels are sought by the local population for their precious little lumps of shining, gray treasure. During spawning time the rivers teem with dog salmon whose meat is bright red and tasty and whose roe is used for caviar; humpback salmon which weigh up to 8 pounds; and malma, the Far Eastern species of Alpine char (trout). Sea mammals and sea birds are found at the land's edge.

VI. Transportation

At the beginning of the 20th century, the few isolated villages along the eastern Primorskiy coast were generally self-sufficient

since regular coastwise shipping was undeveloped. As new settlers arrived and pushed inland to cultivate the land or to exploit the minerals, roads and trails increased in number and improved in quality. Routes across the Sikhote-Alin' Mountains joined the coast with the broad Ussuri Basin. With the increase of Soviet military and economic activities of the 1930's and 1940's, roads to the interior were further expanded, and two railroads were built through the mountains between the settlements and military installations on the coast and interior points. Following World War II, Japanese P.W. labor was employed in the intensified program of extending and improving the road network. Most of the effort seems to have been directed toward expanding the road system running parallel to the coast, thereby knitting together more closely the coastal settlements and making them less dependent upon coastwise shipping.

The rough terrain generally confines the roads and railroads to the valley bottoms. The major east-west roads tend to follow the long trunk streams, such as the Tetyukhe and Lafule rivers. Other roads and trails utilize the smaller longitudinal valleys to connect coastal settlements with each other and to provide overland, often circuitous, routes to the interior. Roads tend to avoid the flat alluvial land of the valley floors. Bridges are essential for vehicular traffic in the non-winter months, but during the cold season ice is often thick enough on the fresh-water streams to support heavy vehicles.

Around major centers of settlement, such as Zaliv Vladimira, local roads are well developed, extensive, and often of an all-weather nature. The roads constructed by Japanese P.W.'s are reportedly 6 to 8 meters (20 to 26 feet) wide, graded, ditched, gravel-surfaced, and well maintained. The trails usually are only foot paths, although in places they may support some vehicular traffic in favorable seasons. Secondary roads, military roads, and trails are most widespread around Zaliv Vladimira, but they are also heavily concentrated in the Tetyukhe area.

A. Major East-West Roads

1. The Tetyukhe Valley Road

The Tetyukhe Valley road begins at Tetyukhe-Pristan' on the coast and extends up the Tetyukhe Valley past Brinerovka and other small villages to the town of Tetyukhe. The importance of this graded all-weather road, which probably continues on to Samarka on the western slopes of the mountains, is lessened by the railroad paralleling it. Nevertheless, the road facilitates rapid transportation between the coast and the several military bases located in the valley.

2. The Tadushskiy - Antonovka Road

This road originates near the settlement of Tadushskiy on the lower Lafule River. It is a graded, all-weather road which winds along the north side of the Lafule Valley and passes through Bogopol', north of Suvorovo, and through Ustinovka, Kintukha, and

Kovalevo (Kovalerovo). Beyond Kovalevo, the road crosses a low divide, probably between 500 and 600 meters (1,640 and 1,970 feet) high, into the Lifudzin River valley and continues down this valley to Antonovka, an airfield town. The road is important as a connection between the coast and the Usuri Basin. Segments of this road also serve to link other roads running to the north and south.

The area between the Tadushaky - Antonovka road and the Tetyukhe River valley road to the north is roughly dissected mountain land with peaks exceeding 1,300 meters (4,265 feet) in height.

3. The Avvakumovka Valley Road

An important graded, gravel highway from the coast to the interior follows the Avvakumovka Valley and connects the seaport of Ol'ga with the villages of Permskaya, Vetka, Novo-Nikolayevka, Moldavanka, and Mikhaylovskoye. At Permanovka the road turns up the Tudagou Valley and crosses into the interior basin.* A branch road leaves the main highway at Mikhaylovskoye, and according to the map, continues in a northwesterly direction to Antonovka.

B. Minor East-West Roads

1. The Agobe Valley Road

North of Tetyukhe-Pristan' a road originates at Lidovka and extends northwesterly up the Agobe Valley. This road continues to the Usuri Basin; however, its importance is unknown. Where visible on aerial photographs it appears to be an all-weather road.

*According to recent aerial photography.

2. The Pad' Krivaya Valley Road

The Pad' Krivaya road originates at Vladimiro-Monomakhovskiy and proceeds up the valley through a few very small settlements. The lower part of the road is of good quality, but in the mountains it may be impassable in winter.

3. The Pkhuzun Valley Road

The Pkhuzun Valley road, which starts at the main coastal highway near Margaritovo, follows the marshy Pkhuzun Valley inland. At the junction of two rivers near Shcherbakovka (Schebakovo) the road bifurcates. One branch passes through Shcherbakovka northward. The second continues as a trail along the Vandagou (Yugo-Sandagou) River. Presumably this trail crosses the divide into the Avvakumovka Valley and joins the Avvakumovka road near Novo-Nikolayevsk.

C. The Coastal Highway

The coastal highway roughly parallels the coastline of Primorskiy Kray. In some places it is located near the sea while in others it is as much as 16 kilometers (10 miles) inland. The road is of considerable local importance for connecting inland valley settlements with the coast. It also is used by the military forces and was reportedly completed in 1947 by Soviet Army labor battalions. The highway branches in a number of places. The main road which is about 10 meters (33 feet) wide is reported to be in excellent condition. It traverses the entire length of the Tetyukhe - Margaritovo

Coastal Region. East of Margaritovo the highway by-passes the village of Tatunga as it ascends the reed and grass covered Tatunga Valley. After crossing a low divide, the highway descends to the short and narrow Chindauza River valley. It crosses the valley enroute to the small town of Staraya Petropavlovka. Beyond Staraya Petropavlovka, the highway passes through a mining area and crosses a divide into the Sydaga River valley which it follows closely for a short distance. The land rises abruptly from the valley and then slopes to the cliffed coast. Within this area, the summit of Gora Nasaypnaya rises to a height of 700 meters (2,300 feet), and its sea side drops to the lake and beach south of Mys Nizmennyy. The coastal hills are cut by ravines and stream valleys stretching down to the sea. Inland from the valley the terrain consists of a jumbled mass of rugged, ridged, and rounded mountains.

The coastal highway generally follows the Sydaga Valley through the villages of Statsenko and Vasil'kovo. This part of the road, especially at higher elevations, may be closed by drifting snow in winter. The road crosses bridges in a number of places and is paralleled by a transmission line for at least part of the way. Minor trails connect the highway with coastal installations at Bukhta Yevstafiya, Mys Nizmennyy, Bukhta Tumolkheda, and elsewhere. Two heights are conspicuous to the east of this section of the highway, Gora Piramidal'naya, 620 meters (2,035 feet), adjacent to a deeply cut section of the Sydaga River and an unnamed, heavily wooded, rounded hill, 430 meters (1,410 feet) high near Mys Manevskogo.

The highway continues along the Sydaga Valley northward from Vasil'kovo. The coastal hills between the highway and sea are dotted with mines and interwoven with trails. The coastal bluff, north of Mys Manevskogo reaches an elevation of 275 meters (900 feet). The highway crosses the broad Avvakumovka Valley and continues via Permskaya (where it is joined by an unimproved road from the interior) to Ol'ga.

Another graded gravel highway runs from the vicinity of Permskaya northeastward along the valley of the Arzamazovka River for 15 kilometers (9 miles) to the military base and airfield at Serafimovka. Ol'ga is the origin of another graded road which leads 12 kilometers (7.5 miles) northward and then swings to the northeast across the ridge between the Ol'ga and Arzamazovka rivers to join the Permskaya - Serafimovka highway.

In the vicinity of Ol'ga there are a number of other trails and roads of limited trafficability which provide access to the various mines and individual dwellings.

From the town of Ol'ga the coastal highway continues northward up the Ol'ga Valley and then down the Vladimirovka Valley to Zaliv Vladimira. Although the AMS map shows a decrease in width for the stretch north of Ol'ga, other reports indicate that the highway continues northward without any reduction in width. Many crooked trails branch off this section of the highway, which is also paralleled by a transmission line. East of the Vladimirovka Valley

section of the road are two peaks which rise to elevations of 555 meters (1,820 feet), and 490 meters (1,605 feet).

Approximately 3 kilometers (2 miles) southwest of the mouth of the Vladimirovka River, the coastal highway branches. The eastern branch continues along the valley through a small agricultural village and then follows the western shore of Zaliv Vladimira past a submarine base to Veselyy Yar. From Veselyy Yar the highway continues to the northeast across a low divide to the village of Kreshchatik (at the western end of Ozero Izvestnyak). This part of the route is within a restricted military area, and portions of a trench system run near the road.

From Kreshchatik the highway runs through a mining area a short distance east of Impan', and on through the small settlement of Zerkal'naya to Tadushkiy (near the mouth of the Lafule River).

The western branch of the coastal highway leaves the Vladimirovka Valley and runs through very rugged terrain several miles to the west of the installations around Zaliv Vladimira. Two major branches of this road lead to the coast -- one terminating at Veselyy Yar and the other at the submarine base 2 kilometers (1.2 miles) to the south of Veselyy Yar. The western and eastern branches of the coastal highway are again interconnected farther to the north by a segment of fair road that runs between Tumanova, 6 kilometers (3.5 miles) north-northwest of Veselyy Yar, and the village of Kreshchatik. The western branch extends beyond Tumanova in a

generally northerly direction to Suvorovo where it connects with the east-west Tedushskiy - Antonovka road. About 12.5 kilometers (8 miles) south of Suvorovo a branch road runs to the southeast via Lupan' to Kreshchatik. About 12.5 kilometers (8 miles) west of Smychka (Malkiye Smychka) the coastal highway leaves the Lafule Valley. Proceeding northeastward across a low saddle the highway traverses the Monastyrka Valley to Tetyukhe-Pristan'. Between Monastyrka (Monastyrevskoye) and Tetyukhe-Pristan' there is a stretch of alternate road which runs on the higher ground west of the valley. This road is probably used when trafficability on the valley road is poor. From Tetyukhe-Pristan' the highway continues northward along the coast.

Inconclusive aerial data suggest the possible existence of a road between Suvorovo and Gorbusha (in the upper Tetyukhe Valley), which parallels the coastal highway.

D. Railroads

Although several railroads are indicated on the maps, only two significant lines can be confirmed by aerial photographs. One railroad starts on the pier at Tetyukhe-Pristan' and goes up the Tetyukhe Valley, closely following the meandering Tetyukhe River. Although Soviet maps show the railroad terminating in the vicinity of Tetyukhe (Verkhov'ye), recent aerial photographs indicate the line extends a considerable distance beyond Tetyukhe, possibly to Samarka or beyond. Japanese P.W.'s report that the line is narrow gauge and single-tracked, but parts of it are double-tracked in Tetyukhe-Pristan'

(Figure 10). The primary function of the Tetyukhe Valley line is to carry lead and zinc ore from the mountain mines to the smelter at Tetyukhe-Pristan'. The line is operational throughout the year.

The second railroad runs from Ol'ga up the Avvakumovka Valley. This single-track line closely parallels the highway on the north side of the valley and extends at least as far as Novo-Nikolayevka or Sandagou.

Although the AMS maps indicate a number of other railroad lines, 1951 aerial photographs indicate that there was definitely no railroad in the lower Lafule Valley, nor was there evidence of a railroad or preliminary construction of one between Zaliv Ol'gi and Zaliv Vladimira. However, there may be a few short, narrow-gauge ore lines within the region.

E. Sea Lanes

Despite the improved land transportation in recent years, the larger coastal settlements are still largely dependent on coastwise shipping to move out the heavy metal ingots, wood products, and fish, and to bring in needed food supplies, fuel, and manufactured goods. The major ports are at Zaliv Ol'gi, Zaliv Vladimira, and Tetyukhe Bay, but ships still anchor in the small coves, and freight is lightered to and from ships. The bay in front of Lake Izvestnyak, and Bukhta Lafule have no docking facilities and do not appear to be used for shipping. Bukhta Tetyukhe remains ice-free in the winter, and Zaliv Vladimira and Zaliv Ol'gi remain open to shipping with the use of ice-breakers.

F. Air Service

Air service within the region appears to be largely military but it is possible that some civil flights from Vladivostok, Khabarovsk, and Iman operate within the region. Airfields with sizeable runways are reported at Serafimovka and Tetyukhe. An emergency landing field is also reported about 15 kilometers (10 miles) northwest of Tetyukhe-Pristan'. Ol'ga has a seaplane base with complete facilities, and Zaliv Vladimira has a minor seaplane base. There are also conflicting reports of an airfield at Ol'ga.

VII. Population and Settlement

The original inhabitants of the region were the aboriginal, animistic, shamanistic, forest dwellers who called themselves Udekhe. The Udekhe consisted of various small tribes whose people attributed divine powers and human qualities to the creatures and objects of nature. These people lived a simple, primitive, and free life in the great wilderness until the arrival of the Chinese hunters, trappers, farmers, and ginseng gatherers, who rapidly subjugated or assimilated the Udekhe, and applied such persuasive punishments as burial alive to keep the fractious natives subdued. To escape harsh treatment by the new Chinese feudal lords some tribesmen retreated into the forest wilds. Many of these turned to brigandage, thereby adding one more danger to the already numerous hazards facing forest travelers. Remnants of Chinese religious influence may still be seen in the form of crude joss houses marked by tatters of colored cloth, and trees or cairns

shrines which stand at the tops of wind-blown passes and along the shadowy forest paths. The last ethnic group to enter the region were the Great Russians who made themselves masters over all.

The Russians are concentrated in the larger towns, in the numerous small fishing villages along the coast, and in the agricultural settlements around the wider bays and in the wide valleys. In some places, Russian settlers have advanced up stream valleys as much as 50 kilometers (30 miles) from the coast. Immediately prior to World War II, whole kolkhozes, people and belongings, were moved to Primorskiy Kray from the west. This influx temporarily ceased during the war, but was resumed later. In addition to Great Russians, many other ethnic groups from distant parts of the USSR and satellites are represented in the coastal region. They include Ukrainians, Belorussians, Poles, Serbs, Bulgarians, Moldavians, Finns, Estonians, Latvians, Lithuanians, Tatars, Chuvashi, Mongols, and others.

The density of population and the number of Russians decrease toward the heart of the Sikhote-Alin' Mountains, where great expanses of the forest are almost completely unpopulated. Only a few Russian and Chinese hunters and trappers penetrate the farthest reaches of the lonely mountain forests in quest of deer and fur-bearing animals. A dwindling number of Udekhe or Goldi (Nanytsi) may still be encountered in the isolated upper stream valleys of the trackless wilderness. Hunting and trapping are the major occupations of these people, and fishing and gardening are supplementary. The natives are Mongoloid in

appearance and many have a strong admixture of Chinese blood. Women have an inferior status and perform most of the menial tasks. Diet is simple, consisting largely of meat, fowl, and raw fish, either fresh or slightly tainted. Houses are usually framed of logs and walled with planks or mud and straw. Storage huts on stilts are common sights in the mountain settlements.

Exploitation of the natural resources of the mountains offers greater possibilities for human endeavor than expansion of agriculture. Forest industries and mining are expanding but construction of more and better roads is a prerequisite for the maximum development of lumbering and mining.

Within the Tetyukhe - Margaritovo Coastal Region, the littoral, with its small industrial, shipping, and military centers, is generally the area of greatest population growth in recent years. However, some mining and military settlements toward the interior have also grown appreciably.

Tetyukhe-Pristan' lies along the north side of the Tetyukhe River valley and extends from the head of Tetyukhe Bay inland about 3 kilometers (2 miles). On both sides of Tetyukhe-Pristan' the hills come down to the sea, but the settled area itself is strung along the flats (Aerial Photograph 1). Cliffs near the river mouth are probably 20 to 30 meters (65 to 100 feet) high. The hills immediately surrounding Tetyukhe steepen toward their summits but their lower slopes are patched with woods and fields. Although the soil in the lowland areas

is black, rich, and arable, the area produces insufficient crops to satisfy local needs. Neither the Tetyukhe River, which averages 10 meters (35 feet) in width, nor the other two streams that also enter the bay are navigable. The shallow bay provides a poor unsheltered anchorage.

Tetyukhe-Pristan' is the major refining center for the lead and zinc ore mined in the mountains near Tetyukhe, about 30 kilometers (19 miles) to the northwest. The population of the Tetyukhe Bay area is variously estimated at 10,000 to 20,000 and the town of Tetyukhe-Pristan' from 3,000 to 7,000. The ethnic composition of the local population is perhaps 30 percent Slavs and 70 percent Central and Eastern Asiatics. Most of the townspeople are engaged in some phase of the mining and refining operations. Drinking water is obtained from artesian wells.

In addition to the lead-zinc smelter, which is located near the center of this sizeable port settlement, there are also a number of small plants, service buildings, and storage structures. These include sawmills and lumber yards, a locomotive repair shop, a boat-building and repair shop, a brick factory, warehouses, oil storage tanks, coal yards, a railroad station, a radio station, a probable meteorological station, a fish-processing plant in the fishing village near the mouth of the Tetyukhe River, and numerous military installations. Buildings are constructed of cinder block, brick, wood, or frames plastered with mud. Military installations include barracks,

coastal defense guns, underground installations, bunkers, a radar site, and navigation lights and wireless stations (at and near Mys Brinerol).

The town of Tetyukhe, located about 30 kilometers (19 miles) up the valley of the Tetyukhe River, has expanded rapidly in recent years and current Soviet maps indicate its population as being in excess of 10,000.

Tetyukhe is the center of Tetyukhinskiy Rayon, the center of the "Dalkhali" mining kombinat as well as the headquarters of the Coastal Provinces District of the Soviet Far Eastern Army which was recently transferred there from Vladivostok. Approximately 12 army divisions are reported to be included in the District. "Dalkhali" is a government trust which is engaged in the mining and processing of lead and zinc ores from the mines in the vicinity. It apparently operates a small refinery in Tetyukhe as well as the larger refinery at Tetyukhe-Pristan'.

A military base is located midway between Tetyukhe-Pristan' and Brinerovka. Military facilities are also reported at Gorbusha (4 kilometers or 2.5 miles northwest of Brinerovka) in the Tetyukhe River valley.

The village of Vladimiro-Monomakhovskiy is almost contiguous with Tetyukhe-Pristan'. It is situated about 5 kilometers (3 miles) inland from Tetyukhe Bay and extends about 3 kilometers (2 miles) alongside the Tetyukhe Valley road and railroad. Vladimiro-Monomakhovskiy

is fairly large due to its proximity to Tetyukhe-Pristan'. Most of the buildings are small houses with garden plots and associated out-buildings. There are also warehouses and military establishments in Vladimiro-Monomakhovskiy. There are two other military bases up the Tetyukhe Valley. One is located midway between Tetyukhe-Pristan' and Brinerovka, a small settlement on the road and railroad.

Soldatenkov is apparently a tiny agricultural village of about 10 buildings located about midway between Tetyukhe-Pristan' and Monastyrka in the Monastyrka Valley.

Monastyrka (Monastyrevskoe) is a small farming settlement that is located 3 to 5 kilometers (2 to 3 miles) south of Tetyukhe-Pristan' on the all-weather coastal road. Houses are small and many of the fields are fenced.

No large settlements are located on the lower Lafule River. Kolkhoz Smychka, on the north side of the Lafule and about 3 kilometers (2 miles) from the coast, is apparently a small farming community. Other agricultural villages on the Lafule River valley road include Bogopol', Kurchush (appears only on Air Force Pilotage Chart 2826), Suvorovo, Skobelevo (appears only on Air Force Pilotage Chart 2826), and Ustinovka. Kintukha and Kovalevo (Kavalerovo) are military, airfield, and mining towns located farther up the Lafule Valley beyond the coastal region.

Tadushskiy is a road junction town about 10 kilometers (6 miles) from the mouth of the Lafule River. It contains a relatively large number of warehouses, barracks, and administrative-type buildings.

About 5 kilometers (3 miles) south of the lower Lafula River is the village of Zerkal'naya, which consists of a few scattered buildings astride the eastern branch of the coastal road. The village map limits are about 0.8 kilometer (0.5 mile) north of the village.

Impan' is a road junction town of about 20 buildings in the Izvestnyak River valley.

Kreshchatik village also has 20 buildings and is located on the valley flats at the western end of the Ozero Izvestnyak.

Tumanova is an agricultural settlement with about 20 buildings in the Khuluay River valley approximately 11 kilometers (7 miles) northnorthwest of Veselyy Yar.

The village of Veselyy Yar is stretched out along the northwest side of Zaliv Vladimira, north of the mouth of the Khuluay River, and in the lee of a 190-meter (625-foot) high granite hill. Veselyy Yar is a fishing and agricultural town and has a fish processing plant, several warehouses, possibly a thermoelectric plant, about 30 dwellings, and one probable military installation. A fishing village (name unknown) with about 40 buildings is located on the west side of Zaliv Vladimira. Military installations around Zaliv Vladimira include bunkers, coastal defense batteries, a military plant, lights, electronic devices, probable underground facilities, and a submarine base near Veselyy Yar.

Yuzhnoye is a small agricultural and fishing village along the south side of Zaliv Vladimira. Military, administrative, and warehouse areas, as well as a possible ore processing plant, are in the vicinity.

Serafimovka, about 15 kilometers (9 miles) west of Zaliv Vladimira in the Arsen'yevka River valley, is important for its military depot and airfield [3] kilometers (2 miles) north of the town and capable of handling medium bombers[7]. Agriculture also contributes to the support of the village.

There are a number of small agricultural and fishing villages south of Serafimovka, but Ol'ga is the only large center. Ol'ga is a compact town on gently sloping land between the foot of forest-clad hills and the northeastern side of the inner Ol'gi Bay (Tikhaya Bukhta) (Aerial Photographs 7 and 8). Zaliv Ol'gi is accessible to shipping throughout the year. Ol'ga was a town of about 1,000 people and 300 buildings prior to World War II, but it has probably increased in size since (one P.W. reports the population of Ol'ga at several thousand). The town covers an area of about 2.5 square kilometers (1 square mile), has a well-defined street pattern, and has many one-storied wooden houses. At one time Ol'ga depended almost entirely on fishing. Today Ol'ga is a rayon center, and a mineral, military, and supply center. Activities reported at Ol'ga include ship and machinery repair, power generation, iodine and poison gas production, fish processing and canning, and ferrous metal production. Iron, tin, and manganese are said to be mined in the Ol'ga district. There are reported plans to tie the metallic mineral-producing Ol'ga district to the Suchan coal district in southern Primorskiy Kray. A seaplane base with 2 hangars and 245 meters (800 feet) of frontage is on the west side of the harbor

near Ol'ga. Naval base installations are on the north side of Brown Channel, the entrance to Tikhaya Bukhta. Other military installations include coastal defense positions, a radio station, meteorological station, fuel dump, ammunition depot, an air navigation light and possibly an airfield, and military headquarters.

The Cape Nizmennyy area is militarily significant for its lighthouse, radio facilities, and coastal defense positions. There may also be radar installations there.

Margaritovo is a relatively unimportant village, but iron ore deposits said to have a 50 percent metallic content have been discovered nearby.

VIII Analyst's Note

Most of the geographic data contained in this report was obtained from Russian, Japanese, German, and American books and documents, and from aerial photographs, and AMS maps. Map coverage is poor. No large-scale Russian maps are available for the Tetyukhe - Margaritovo Coastal Region. Locations of roads, settlements, and physical features on the AMS 1:250,000 maps that are included with the report frequently conflict with those appearing on other maps and aerial photographs. Detailed information on road and railroad traffic, inland landform elevations and degree of slopes, and flow and size of rivers is lacking.

25X1C [redacted] photographs are available for most of the area from Tetyukhe to Margaritovo and these have been used extensively for the orientation and description of features.

Aerial Photograph 1. Coastal cliffs, bar, and lagoon at Mys Yuzhnyy.

Aerial Photograph 2. Tetyukhe River, town, and bay.

Aerial Photographs 3 and 4. Lafule River valley and Bukhta Lafule.

Aerial Photograph 5. Severnaya Bukhta of Zaliv Vladimira; the town of Veselyy Yar to the right of the Khuluay River mouth. Submarine base to the left of the Khuluay River mouth.

Aerial Photograph 6. Yuzhnaya Bukhta of Zaliv Vladimira; a portion of the village of Yuzhnoye visible at the extreme left of the photograph.

Aerial Photographs 7 and 8. The town of Ol'ga located at the mouth of the Ol'ga River where it empties into Tikhaya Bukhta.

Aerial Photograph 9. Lower Avvakumovka River valley near its entrance to Zaliv Ol'gi. In the middleground the Sydaga River joins the Avvakumovka from the left.

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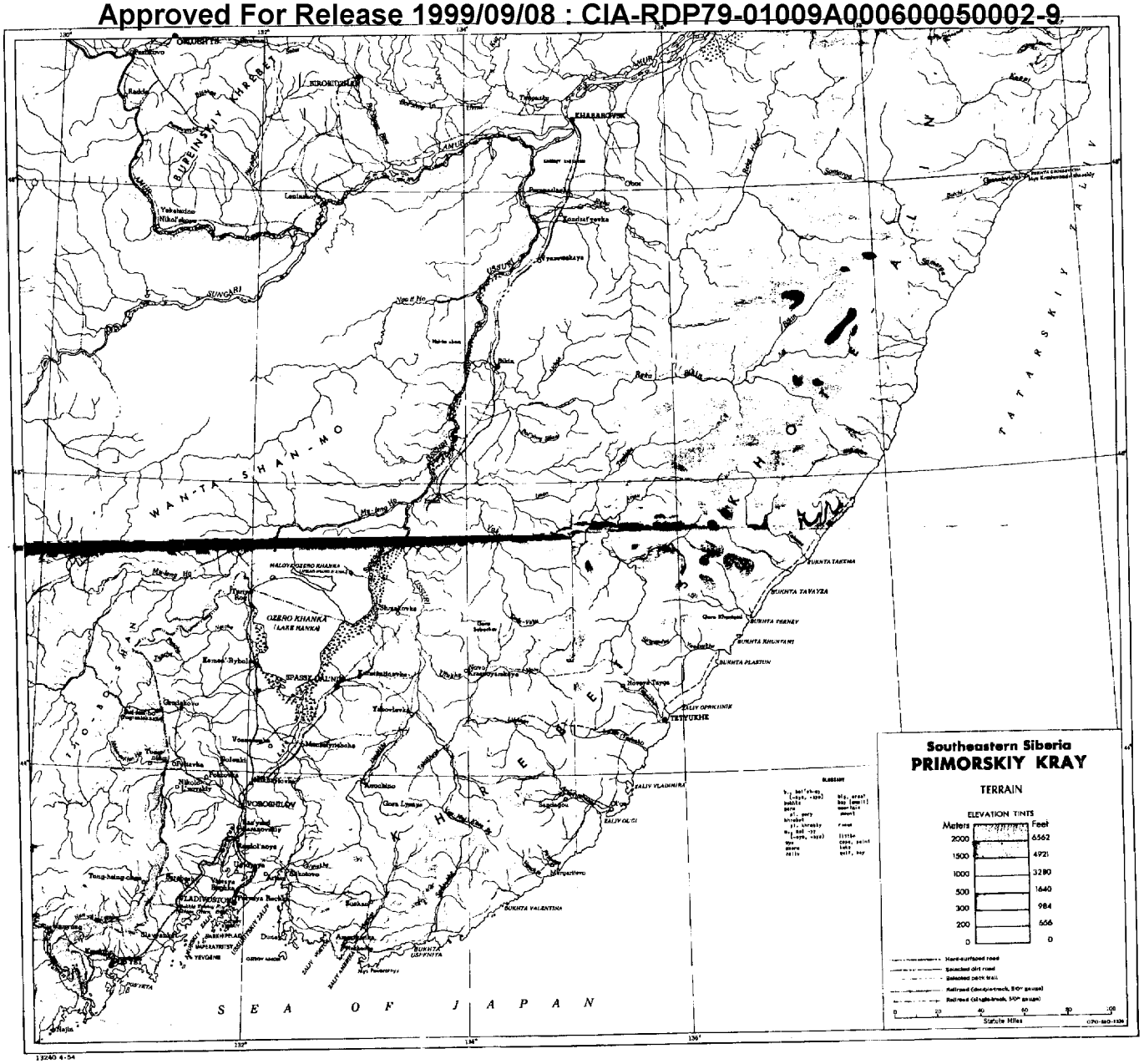

EASTERN SIBERIA 1:250,000

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